

## **MABE Publications and Presentations**

### **2009**

- Raj, R., Kim, J., and McQuillen, “Subcooled Pool Boiling in Variable Gravity Environments” Accepted for publication Journal of Heat Transfer, Vol. 131/ 091502, 2009
- Raj, R. Kim, J. "Thermocapillary Convection during Subcooled Boiling in Reduced Gravity Environments." Annals of the New York Academy of Sciences 1161(Interdisciplinary Transport Phenomena Fluid, Thermal, Biological, Materials, and Space Sciences): 173-181.
- Liu, Z., Herman, C., Kim, J. "Heat Transfer and Bubble Detachment in Subcooled Pool Boiling from a Downward-Facing Microheater Array in a Non-Uniform Electric Field." Annals of the New York Academy of Sciences 1161(Interdisciplinary Transport Phenomena Fluid, Thermal, Biological, Materials, and Space Sciences): 182-191.

### **2007 & 2008**

- Liu, Z., Herman, C., and Kim, J. “Heat Transfer and Bubble Detachment in Subcooled Pool Boiling from a Microheater Array Under the Effect of a Non-Uniform Electric Field”, Proceedings of the ASME/JSME/Interpak Conference, July, 2007, Vancouver, CA.
- Liu, Z., Herman, C., and Kim, J., “Heat Transfer and Bubble Detachment in Subcooled Pool Boiling from a Downward-Facing Microheater Array in a Non-Uniform Electric Field”, Submitted to the Annals of the New York Academy of Sciences.
- Raj, R, Kim, J., “Thermocapillary Convection During Subcooled Boiling in Reduced Gravity Environments”, Submitted to the Annals of the New York Academy of Sciences.
- Arnold, W. A., Hartman, T. G. and McQuillen, J. “Chemical Characterization and Thermal Stressing Studies of Perfluorohexane Fluids for Space-Based Applications,” Journal Of Spacecraft And Rockets, pp 94-101, Vol. 44, No. 1, January–February 2007

### **Pre-2007**

- Henry\*, C.D., Kim, J., and McQuillen, J. “Dissolved Gas Effects on Thermocapillary Convection During Boiling in Reduced Gravity Environments”, Heat and Mass Transfer, Vol. 42, pp. 919-928, 2006.
- Henry, C.D., Kim, J., Chamberlain, B., and Hartmann, T.G., “Heater aspect ratio effects on pool boiling heat transfer under varying gravity conditions”, Experimental Thermal and Fluid Science, Vol. 29, No. 7, pp. 773-782, 2005.

- Myers, J.G., Yerrramilli, V.K., Hussey, S.W., Yee, G.F., and Kim, J., “Time and space resolved wall temperature and heat flux measurements during nucleate boiling with constant heat flux boundary conditions”, *International Journal of Heat and Mass Transfer*, Vol. 48, No. 12, pp. 2429-2442, 2005.
- Henry, C.D., Kim, J., “Thermocapillary Effects on Low-G Pool Boiling From Microheater Arrays of Various Aspect Ratio”, *Microgravity Science and Technology*, XVI, pp. 170-175, 2005.
- Demiray, F. and Kim, J., “Microscale Heat Transfer Measurements During Pool Boiling of FC-72: Effect of Subcooling”, *International Journal of Heat and Mass Transfer*, Vol. 47 pp. 3257-3268, 2004.
- Kim, J., “Review of reduced gravity boiling heat transfer: US Research”, Invited review paper for *Japan Society of Microgravity Application Journal*, Vol. 20, No. 4, pp. 264-271, 2003.
- Yin, Z., Prosperetti, A., Kim, J. “Bubble Growth on an Impulsively Powered Microheater”, *International Journal of Heat and Mass Transfer*, Vol. 47, No. 5, pp. 1053-1067, 2004. (8, 7)
- Henry, C.D. and Kim, J. “Heater size, subcooling, and gravity effects on pool boiling heat transfer”, *International Journal of Heat and Fluid Flow*, Vol. 25, No. 2, pp. 262-273, 2004.